Promoting Alternative Thinking Strategies (PATHS)

Program description:
The PATHS Curriculum is a classroom socioemotional learning (SEL) program designed to improve self-control, emotional understanding, interpersonal relationships, and social problem-solving skills. Through development of these skills, PATHS aims to prevent serious emotional and behavioral problems.

Typical age of primary program participant: 6

Typical age of secondary program participant: N/A

Meta-Analysis of Program Effects

Outcomes Measured	Primary or Secondary Participant	No. of Effect Sizes	Unadjusted Effect Sizes (Random Effects Model)			Adjusted Effect Sizes and Standard Errors Used in the Benefit-Cost Analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Externalizing behavior symptoms	P	4	-0.05	0.14	0.74	0.00	0.14	7	0.00	0.06	12
Internalizing symptoms	P	3	-0.06	0.12	0.62	0.00	0.12	7	0.00	0.05	12

Benefit-Cost Summary

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2011). The economic discount rates and other relevant parameters are described in Technical Appendix 2.

Program Benefits					Costs	Summary Statistics			
Participants	Taxpayers	Other	Other Indirect	Total Benefits		Benefit to Cost Ratio	Return on Investment	Benefits Minus Costs	Probability of a positive net present value
-$4	-$6	-$6	-$3	-$19	-$115	-$0.17	n/e	-$134	23%

Detailed Monetary Benefit Estimates

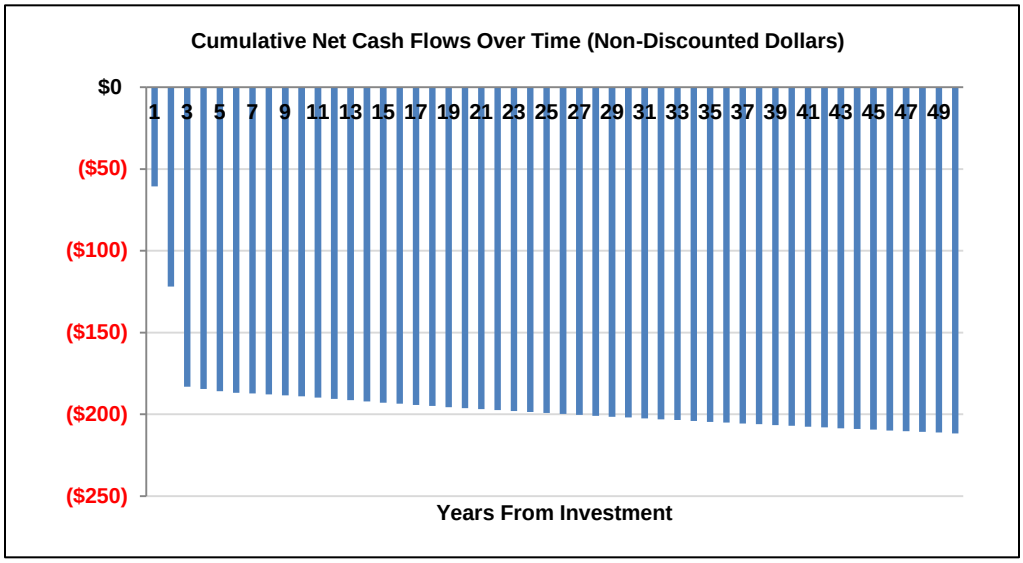
Source of Benefits	Benefits to: Participants	Taxpayers	Other	Other Indirect	Total Benefits
Crime	$0	$0	-$1	$0	-$1
Earnings via high school graduation	-$2	-$1	$0	$0	-$3
Health care costs for disruptive behavior symptoms	-$2	-$5	-$5	-$3	-$15

Detailed Cost Estimates

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The uncertainty range is used in Monte Carlo risk analysis, described in Technical Appendix 2.

Program Costs			Comparison Costs			Summary Statistics	
Annual Cost	Program Duration	Year Dollars	Annual Cost	Program Duration	Year Dollars	Present Value of Net Program Costs (in 2011 dollars)	Uncertainty (+ or – %)
$30	3	1998	$0	3	1998	$115	10%

Source: Based on midpoint of annual per-student costs from Blueprints for Violence Prevention: http://www.colorado.edu/cspv/blueprints/modelprograms/PATHS.html.



Multiplicative Adjustments Applied to the Meta-Analysis

Type of Adjustment	Multiplier
1- Less well-implemented comparison group or observational study, with some covariates.	0.5
2- Well-implemented comparison group design, often with many statistical controls.	0.5
3- Well-done observational study with many statistical controls (e.g., IV, regression discontinuity).	0.75
4- Random assignment, with some RA implementation issues.	0.75
5- Well-done random assignment study.	1.00
Program developer = researcher	0.5
Unusual (not “real world”) setting	0.5
Weak measurement used	0.5

Studies Used in the Meta-Analysis

Conduct Problems Prevention Research Group. (1999). Initial impact of the Fast Track prevention trial for conduct problems: II. Classroom effects. *Journal of Consulting and Clinical Psychology, 67*(5), 648-657.

Domitrovich, C., Cortes, R., & Greenberg, M. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *Journal of Primary Prevention, 28*(2), 67-91.

Greenberg, M. T., & Kusché, C. A. (1998). Preventive intervention for school-age deaf children: The PATHS curriculum. *Journal of Deaf Studies and Deaf Education, 3*(1), 49-63.

Riggs, N., Greenberg, M., Kusché C. A., C., & Pentz, M. (2006). The mediational role of neurocognition in the behavioral outcomes of a social-emotional prevention program in elementary school students: Effects of the PATHS curriculum. *Prevention Science, 7*(1), 91-102.